



Sea Engineering Inc.

### Daily Oversight Log

**Project:** NBSA  
**Proj. Location:** Newark Bay, Newark, NJ  
**Client:** HDR/HQI, LBG, EPA  
**Date:** 7-Dec-2012  
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#### Survey Information

**Personnel:** Bob Wallace, George Main, John Bean, Len (OSI)  
Kavin Gandhi (ARCADIS)  
Jason Magalen (SEI)  
**Start Time:** 7:30 **Stop Time:** 15:30  
**Survey Company:** Ocean Surveys, Inc.  
**Weather Conditions:** Overcast, calm, cold (40-deg waves less than 1')

#### Daily Log of Activities and Observations

Time (EDT)	Activity Description
7:45	Safety meeting about cold and ice on docks
8:10	A simultaneous elevation check was made between the Port Elizabeth tide gauge and the PK nail that OSI had set in a pile on 12/6/2012. The vertical offset between the tide board measurement and the PK nail tide measurement was 0.02'
	-Further, the navigation check of the ABLE II vessel position compared to the PK nail surveyed position offset was less than 0.1'
	-Daily horizontal position checks (nav checks) will be completed in this manner. During the survey, the tide elevations will be verified at the RRYC PK nail when weather conditions prevent measurement at the Port Elizabeth tide board
8:15	Depart RRYC for continuation of performance/patch tests (patch test of side-looking multi-beam)
8:25	Multi-beam head placed in the water (side-looking)
	-Sound velocity cast in the navigation channel
8:30	Bar check of the multi-beam sonar
8:45	Start patch test of side-looking multi-beam
9:00	Roll test is all that is necessary as pitch, latency and yaw are not affected by rotating the sonar head
	-per OSI, this has been verified by previous patch test results
	-The roll value used after the patch test is -43.83 degrees
9:15	Sound Velocity cast in navigation channel prior to start of performance test - aborted
9:25	Single-beam performance re-test in deep water yielded a mean bias of 0.11' and max outlier less than 1.0'
9:30	Sound Velocity cast in navigation channel prior to start of performance test
9:40	Start performance test of side-looking multi-beam in deep water
9:55	Deep water side-looking performance test results (using a 50 m multi-beam sweep range)
	Out to an angle of 70 degrees: mean bias = 0.07', max outlier = 0.6'
	Out to 75 degrees was just over threshold criteria (max outlier 1.0)
	Deep water side-looking performance test results (using a 75 m multi-beam sweep range)
	Out to an angle of 75 degrees: mean bias = 0.02', max outlier less than 1.0'
10:15	Sound velocity cast at shallow water performance test site.
10:25	Start shallow water, side-looking performance test
10:45	Shallow water performance test results (25 m sweep range)
	Out to 75 degrees: mean bias = 0.06', max outlier = 0.35'
11:10	Multi-beam head raised out of the water. Transit toward Port Elizabeth tide board
11:15	Tide board reading = 7.45' (in tide board datum)
11:20	Head toward Passaic River to search for location to test outer beams of the side-looking system
	-The HYPACK beam angle test only allows beam angles out to 75 degrees to be evaluated
	-Therefore, an attempt will be made to compare the side-looking system out to 90 degrees with the single-beam results from the same surface (a surface with a steeper slope)
11:35	Multi-beam head placed in the water (side-looking)
11:45	Sound velocity cast in Passaic River navigation channel
11:55	Run side-looking multi-beam along west side of the Passaic River mouth
	A few seemingly sufficient slopes were discovered and attempted to survey with the multi-beam sonar
12:25	Having trouble keeping navigation fixed at the locations desired to survey. Raised the RTK GPS radio antenna, but still no luck. Searching for an additional location downstream along the Passaic River mouth

